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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/713,594

11/13/2003

Lawrence J. Karr

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1987

7590

11/20/2008

Attention: Joshua W. Korver  
MERCHANT & GOULD P.C.  
P.O. Box 2903  
Minneapolis, MN 55402-0903

EXAMINER

NGUYEN, DUC M

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

11/20/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/713,594	<b>Applicant(s)</b> KARR ET AL.	
	<b>Examiner</b> DUC M. NGUYEN	<b>Art Unit</b> 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-11 and 44-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-11, 44-53  
is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This action is in response to applicant's response filed on 9/12/08. Claims 2-11, 44-53 are now pending in the present application.

### *Claim Rejections - 35 USC 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim **2** is rejected under 35 U.S.C. 103(a) as being unpatentable by **Cameron** (US 2002/0051499).

Regarding claim **2**, **Cameron** teaches a transmitter, comprising:

a first interface (see Fig. 2A regarding data source 271), which would implicitly comprise an interface for the data source (i.e, ref. 207 or 209 in Fig. 2B);

first encoder coupled to said first interface through a second encoder (see Fig. 2B regarding RS encoder 201 and Turbo encoder 203);

a packet assembler (see Fig. 2B regarding mapper 205) coupled to said first encoder (turbo 203) and to the first interface through the second encoder (RS 201) such that the packet assembler receives input from the data encoder when transmitting at a

Art Unit: 2618

first transmission speed and the packet assembler receives input from the first interface through the second encoder when transmitting at a second transmission speed, such that first encoder is bypassed when transmitting at the second transmission speed (see Fig. 2B and 0071 noting for “depend on the data rate”), which clearly suggests that at least two transmission speeds are utilized (i.e, one with Turbo encoder and the other one without the Turbo encoder), not to mention the delay caused by the second encoder on the transmission speed ;

a control function coupled to said first interface, said encoder and said packet assembler (an inherent component in order to control the encoding of message data);

a modulator, coupled to the packet assembler, that comprises a localcast mode; and an antenna coupled to the modulator (see Fig. 1 regarding transmitter and antenna 103), which would implicitly comprise a modulator in order modulate the encoded data into a carrier channel for transmitting.

As to the limitation regarding a localcast transmitter or a localcast mode, one skilled in the art would recognize that the transmitter in Cameron would be applicable to any transmitter (intended use) and would work equally well, noting that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex parte Masham* 2 USPQ2d 1647 1987).

Therefore, the claimed limitations are made obvious by Cameron.

3. Claims **2-6, 8-9, 44-46** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kaiser** (US **6,060,996**) in view of **Cameron** (US 2002/0051499).

Regarding claim **2**, **Kaiser** discloses a method of re-broadcasting data transmitted over an FM subcarrier (see col. 2, lines 4—44, col. 4, lines 17-22), comprising:

- receiving at a localcast transmitter (see Fig. 8, ref. 130) said transmitted data (see col. 2, lines 23-40), wherein the mobile paging transceiver 130 would read on the “localcast transmitter”;

- locally formatting said transmitted data for local-area wireless transmission (see col. 4, lines 17-54), wherein locally formatting the transmitted data includes encoding, the transmitted data at a data encoder when retransmitting using a first transmission speed or retransmitting using a second transmission speed (see Fig. 3 and col. 2, line 48-53, col. 4, lines 45-46), wherein it is clear that when the mobile paging transceiver 130 receives a message from satellite and retransmitting the message in a SWIFT or MSB protocol to a pager, two transmission speed would have been be utilized (see col. 4, lines 19-22, 45-46); and

- retransmitting said locally formatting data to a local-area (see Fig. 8 and col. 2, lines 23-40, col. 4, lines 19-22).

However, **Kaiser** fails to teach the step of bypassing an encoder when using a second transmission speed. However, **Cameron** discloses an encoder which comprises a RS coder and a turbo coder (see Fig. 2 and [0091]), wherein **Cameron** further discloses that the system encoder bypasses the turbo encoder for a higher data rate (see Fig. 2 and [0071]). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to further incorporate Cameron’s teaching to Kaiser to

Art Unit: 2618

utilize encoders with a bypass as claimed, for increasing the data transmission rate when the signal quality is very good (i.e, transmitting data using SWIFT protocol without performing Turbo coding when the signal quality is very good). Note also that the claimed "localcast transmitter with an encoder bypass" is just an "intended use" of **Cameron's** teaching in a localcast transmitter.

Therefore, the claimed limitations are made obvious by Kaiser and Cameron, noting that a first interface, a packet assembler, a control function, a modulator and an antenna are just well known features of a transmitter in order to assemble and modulate encoded data to a carrier channel for transmitting by an antenna (i.e, see Kaiser, Figs. 3, 6).

Regarding claim **3**, it is rejected for the same reason as set forth in claim 2 above. In addition, Kaiser would teach a data source as claimed (i.e, satellite data source).

Regarding claim **4**, it is rejected for the same reason as set forth in claim 2 above. In addition, Kaiser would teach an RS-232 interface as claimed (see Fig. 3).

Regarding claim **5**, it is rejected for the same reason as set forth in claim 2 above. In addition, since performing handshaking function for synchronizing is well known in the art (Official Notice), it would have been obvious to one skilled in the art at the time the invention was made to modify Kaiser for performing a handshaking function as claimed, in order to synchronizing with the mobile device before starting a communication.

Regarding claim **6**, it is rejected for the same reason as set forth in claim 2 above. In addition, Kaiser as modified in view of Cameron would teach encoders as claimed (see Cameron, Fig. 2B), wherein the data input to the second encoder (RS encoder) would comprise only system information block (i.e, FEC correction errors), and the data input to the first encoder (Turbo) would comprise only data segment (i.e, QAM or QPSK coding, this is interpreted in light of the specification, Fig. 4 and paragraph [0055] with the broadest reasonable interpretation).

Regarding claim **8**, the claim is rejected for the same reason as set forth in claim 2 above. In addition, **Kaiser** would teach a locally-unused FM frequency for retransmitting data in the local area as claimed (see col. 2, lines 40-42).

Regarding claim **9**, the claim is rejected for the same reason as set forth in claim 2 above. In addition, since storing data in a server or a PC is well known in the art, it would have been obvious to one skilled in the art at the time the invention was made to modify Kaiser for storing data source in a personal computer system, thereby providing a data source for transmitting to a mobile device as claimed, for utilizing advantages of a PC system such as cost and portability.

Regarding claim **44**, the claim is rejected for the same reason as set forth in claim 2 above, wherein the mobile paging transceiver 130 would read on the claimed “mobile device” with a localcast mode and a broadcast mode as claimed (see Fig. 1, noting that the mobile paging transceiver 130 is mounted on a “vehicle”).

Regarding claim **45**, the claim is rejected for the same reason as set forth in claim 44 above, wherein it is clear that in order to retransmit data to a mobile pager after

Art Unit: 2618

receiving data from a data source, the mobile transceiver in Kaiser would obviously set a desired transmission frequency, transmission mode and signal power as claimed, in order to allocate a frequency/channel for transmitting data in MSB or SWIFT protocol, at an appropriate signal power for reception by the mobile pager.

Regarding claim **46**, the claim is rejected for the same reason as set forth in claim 44 above, wherein it is clear that Kaiser as modified would teach the encoded data would be formatted into baseband samples as claimed, in order to modulating to a modulated signal for transmitting (well known features of a transmitter).

4. Claims **7, 10-11, 47-53** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kaiser** in view of **Cameron** and further in view of **Chadwick** (US **5,168,271**).

Regarding claim **7**, the claim is rejected for the same reason as set forth in claim 2 above. In addition, since such features as recited in the claims (i.e, adding correlation, interleaving and format baseband samples) are known features of an encoder/modulator as disclosed by **Chadwick** (see Fig. 2 and col. 4, line 36 – col. 6, line 22), it would have been obvious to one skilled in the art at the time the invention was made to further modify Kaiser to provide the encoder/modulator in Chadwick's teaching to the transceiver in Kaiser as well, for synchronizing and improving data transmission/reception errors.

Regarding claims **10-11**, the claims are rejected for the same reason as set forth in claim 2 above. In addition, it is well known that the Turbo coder is just a type of



Art Unit: 2618

convolution encoder (see Cameron, Fig. 7), and that the RS encoder in Cameron could also be implemented with a convolution encoder as disclosed by Chadwick (see col. 4, lines 36-57), for FEC error correction, where the FEC codes would read on “system information”. Therefore, the claimed limitations regarding convolution encoders are made obvious by Cameron in view of Chadwick. Also note that the packet data would implicitly be encoded with systematic bits and parity data bits in order to increase the redundancy of the encoded data.

Regarding claim **47**, **Kaiser** as modified in view of Chadwick would disclose means to add correlation information for synchronization as claimed (see **Chadwick**, Fig. 2, and col. 5, lines 37-60).

Regarding claim **48**, **Kaiser** as modified in view of Chadwick would disclose means for interleaving data into segments as claimed (see Chadwick, Fig. 2, and col. 5, lines 7-35).

Regarding claim **49**, **Kaiser** as modified in view of Chadwick would disclose means for modulation as claimed (see Chadwick, Fig. 2, and col. 6, lines 8-22).

Regarding claim **50**, the claim is interpreted and rejected for the same reason as set forth in claim 7 above. In addition, Kaiser as modified in view of Cameron would teach encoders as claimed (see Cameron, Fig. 2B), wherein the data input to the second encoder (RS encoder) would comprise only system information block (i.e, FEC correction errors), and the data input to the first encoder (Turbo) would comprise only data segment (i.e, QAM or QPSK coding, this is interpreted in light of the specification, Fig. 4 and paragraph [0055] with the broadest reasonable interpretation).

Regarding claim **51**, the claim is rejected for the same reason as set forth in claim 50 above. In addition, Kaiser would teach an RS-232 interface as claimed (see Fig. 3).

Regarding claims **52-53**, the claims are rejected for the same reason as set forth in claim 50 above. In addition, Kaiser as modified in view of Cameron would teach encoders as claimed (see Cameron, Fig. 2B).

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 2-11, 44-53 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See the attached PTO-892.

7. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(571) 273-8300 (for **formal** communications intended for entry)

(571)-273-7893 (for informal or **draft** communications).

Art Unit: 2618

Hand-delivered responses should be brought to Customer Service Window,  
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry concerning this communication or communications from the examiner  
should be directed to Duc M. Nguyen whose telephone number is (571) 272-7893,  
Monday-Thursday (9:00 AM - 5:00 PM).

Or to Nay Maung (Supervisor) whose telephone number is (571) 272-7882.

/Duc M. Nguyen/

Primary Examiner, Art Unit 2618

Nov 14, 2008